

ATGAAGCTCGCCGCCCTCCTGGGGCTCTGCGTGGCCCTGTCCTGCAGCTCCGC
TCGTGCTTTCTTAGTGGGCTCGGCCAAGCCTGTGGCCCAGCCTGTCGCTGCGC
TGGAGTCGGCGGCGGAGGCCGGGGCCGGGACCCTGGCCAACCCCTCGGCA
CCCTCAACCCGCTGAAGCTCCTGCTGAGCAGCCTGGGCATCCCCGTGAACCA
CCTCATAGAGGGCTCCCAGAAGTGTGTGGCTGAGCTGGGTCCCCAGGCCGTG
GGGGCCGTGAAGGCCCTGAAGGCCCTGCTGGGGGCCCTGACAGTGTTTGGC

FIG. 1A

CGTGCTTTCTTAGTGGGCTCGGCCAAGCCTGTGGCCCAGCCTGTCGCTGCGCT
GGAGTCGGCGGCGGAGGCCGGGGCCGGGACCCTGGCCAACCCCTCGGCAC
CCTCAACCCGCTGAAGCTCCTGCTGAGCAGCCTGGGCATCCCCGTGAACCAC
CTCATAGAGGGCTCCCAGAAGTGTGTGGCTGAGCTGGGTCCCCAGGCCGTG
GGGCCGTGAAGGCCCTGAAGGCCCTGCTGGGGGCCCTGACAGTGTTTGGC

FIG. 1B

TTCTTAGTGGGCTCGGCCAAGCCTGTGGCCCAGCCTGTCGCTGCGCTGGAGTC
GGCGGCGGAGGCCGGGGCCGGGACCCTGGCCAACCCCTCGGCACCCTCAAC
CCGCTGAAGCTCCTGCTGAGCAGCCTGGGCATCCCCGTGAACCACCTCATAG
AGGGCTCCCAGAAGTGTGTGGCTGAGCTGGGTCCCCAGGCCGTGGGGGCCGT
GAAGGCCCTGAAGGCCCTGCTGGGGGCCCTGACAGTGTTTGGC

FIG. 1C

MKLAALLGLCVALSCSSARAFLVGSAPVAQPVAALSAEAGAGTLANPLGTL
NPLKLLLSSLGIPVNHIEGSQKCVAELGPQAVGAVKALKALLGALTVFG

FIG. 2A

RAFLVGSAPVAQPVAALSAEAGAGTLANPLGTLNPLKLLLSSLGIPVNHIE
GSQKCVAELGPQAVGAVKALKALLGALTVFG

FIG. 2B

FLVGSAPVAQPVAALSAEAGAGTLANPLGTLNPLKLLLSSLGIPVNHIEGS
QKCVAELGPQAVGAVKALKALLGALTVFG

FIG. 2C

ATGAAGCTTACCACCACCTTTCTAGTGCTCTGTGTGGCTCTGCTCAGTGA
TGGTGTGTTGCTTTCTTCATGGACTCATTGGCCAAGCCTGCGGTAGAACCCGTGG
CCGCCCTTGCTCCAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACC
ATTAAGCCACTTGGCCATCCTGAGGTTTCATCCTGGCCAGCATGGGCATCCCAT
TGGATCCTCTCATAGAGGGATCCAGGAAGTGTGTACCGAGCTGGGCCCTGA
GGCTGTAGGAGCTGTGAAGTCACTGCTGGGGGTCCTGACAATGTTCGGT

FIG. 3A

GTTGCTTTCTTCATGGACTCATTGGCCAAGCCTGCGGTAGAACCCGTGGCCGC
CCTTGCTCCAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACCATTA
AGCCACTTGGCCATCCTGAGGTTTCATCCTGGCCAGCATGGGCATCCCATTTGG
ATCCTCTCATAGAGGGATCCAGGAAGTGTGTACCGAGCTGGGCCCTGAGGC
TGTAGGAGCTGTGAAGTCACTGCTGGGGGTCCTGACAATGTTCGGT

FIG. 3B

TTCTTCATGGACTCATTGGCCAAGCCTGCGGTAGAACCCGTGGCCGCCCTTGC
TCCAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACCATTAAGCCAC
TTGGCCATCCTGAGGTTTCATCCTGGCCAGCATGGGCATCCCATTTGGATCCTCT
CATAGAGGGATCCAGGAAGTGTGTACCGAGCTGGGCCCTGAGGCTGTAGGA
GCTGTGAAGTCACTGCTGGGGGTCCTGACAATGTTCGGT

FIG. 3C

MKLTTTFLVLCVALLSDSGVAFFMDSLAKPAVEPVAALAPAAEAVAGAVPSLPL
SHLAILRFILASMGIPLDPLIEGSRKCVTELGPVAVGAVKSLLGVLTMTFG

FIG. 4A

VAFFMDSLAKPAVEPVAALAPAAEAVAGAVPSLPLSHLAILRFILASMGIPLDPLI
EGSRKCVTELGPVAVGAVKSLLGVLTMTFG

FIG. 4B

FFMDSLAKPAVEPVAALAPAAEAVAGAVPSLPLSHLAILRFILASMGIPLDPLIEG
SRKCVTELGPVAVGAVKSLLGVLTMTFG

FIG. 4C

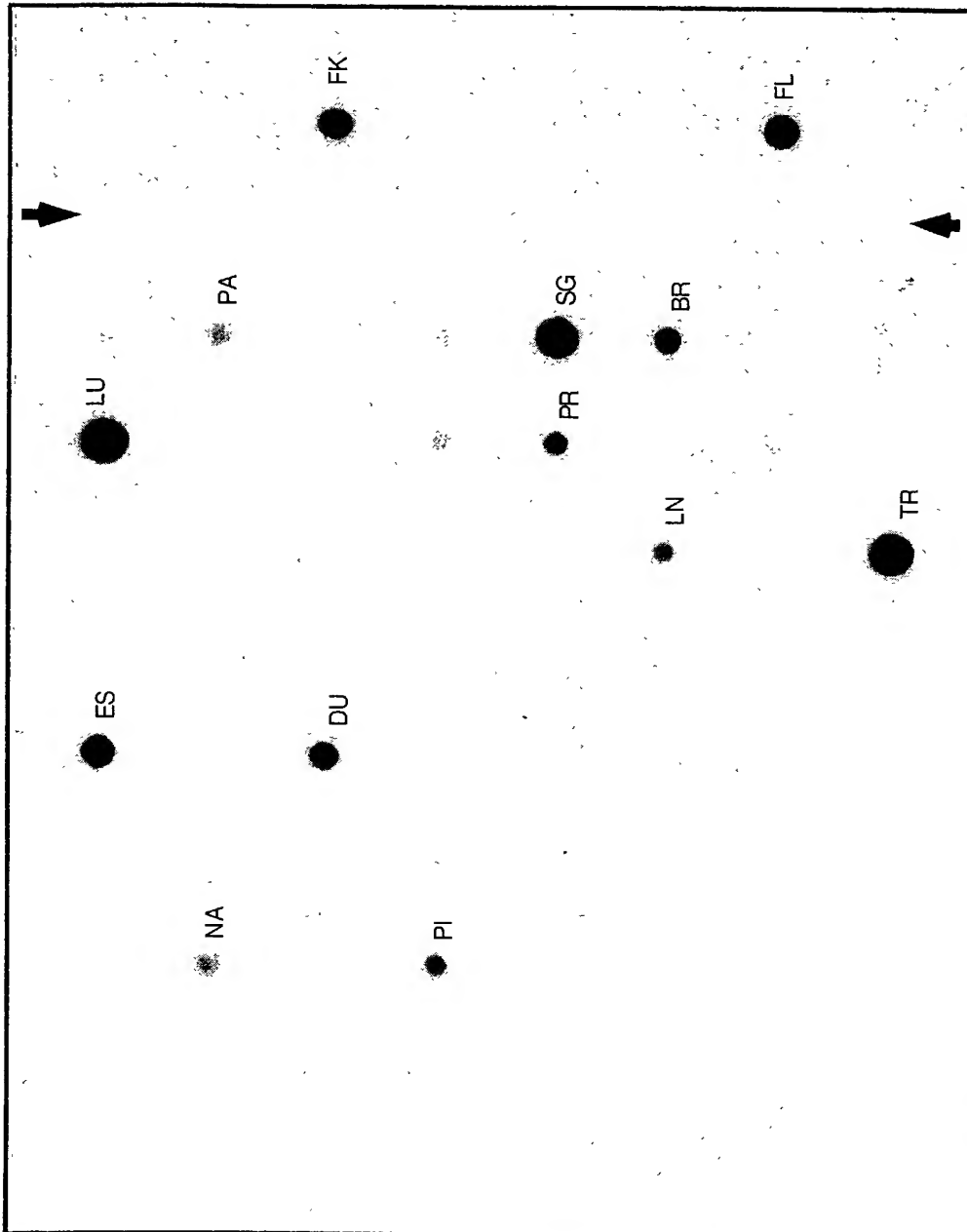


FIG. 5A

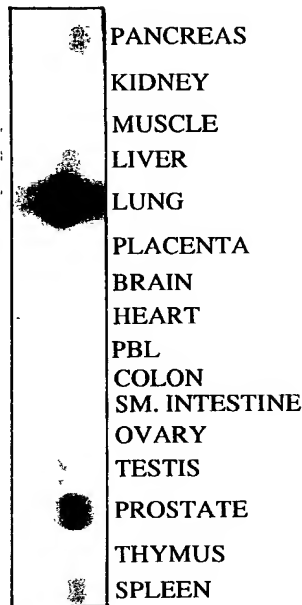


FIG. 5B



FIG. 5C



FIG. 5D

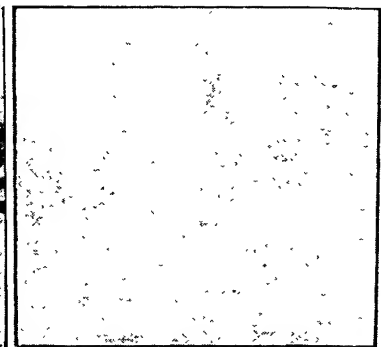


FIG. 5E

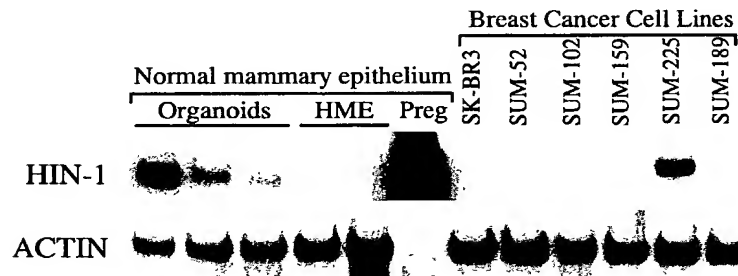


FIG. 5F

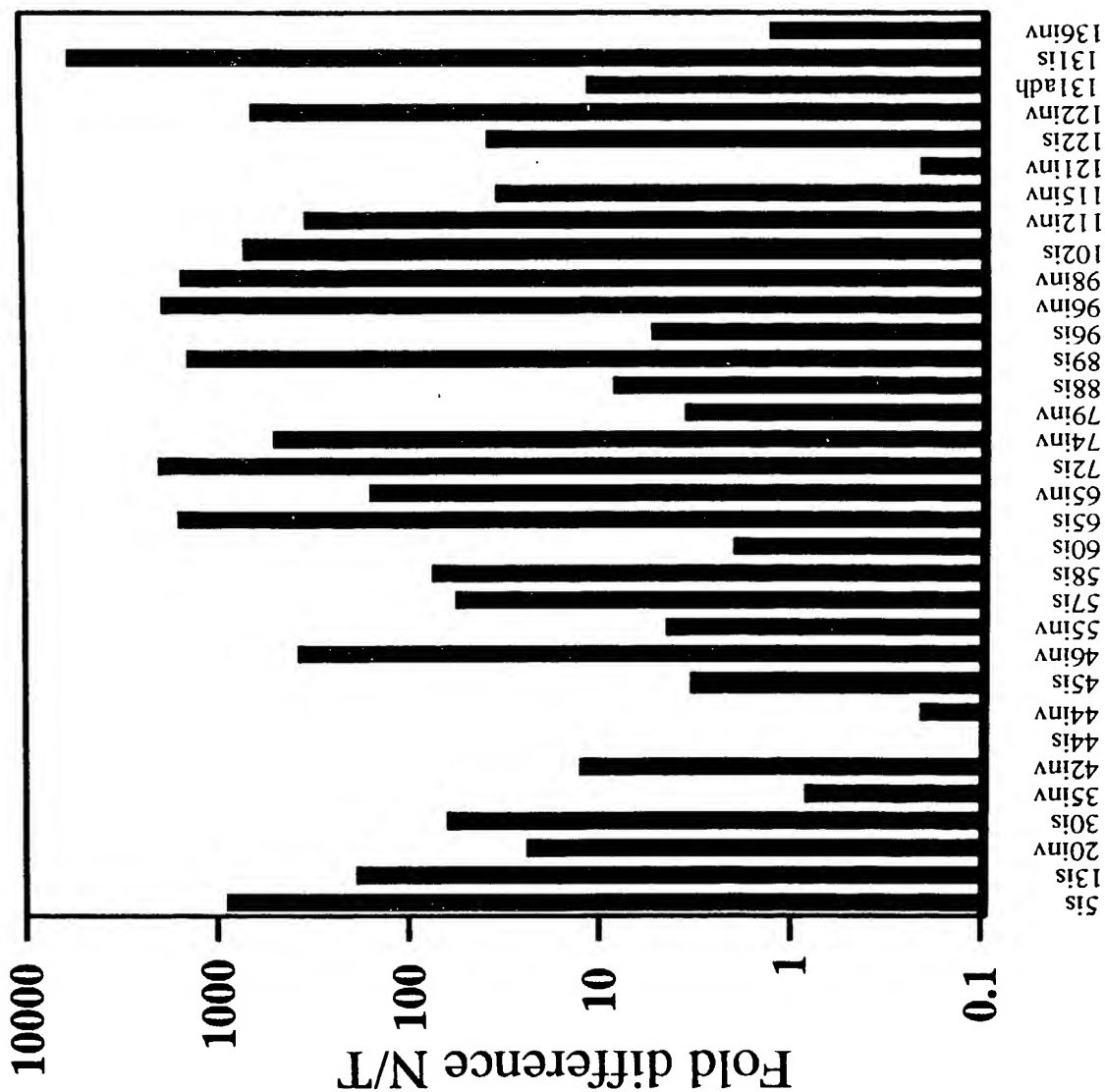


FIG. 5G

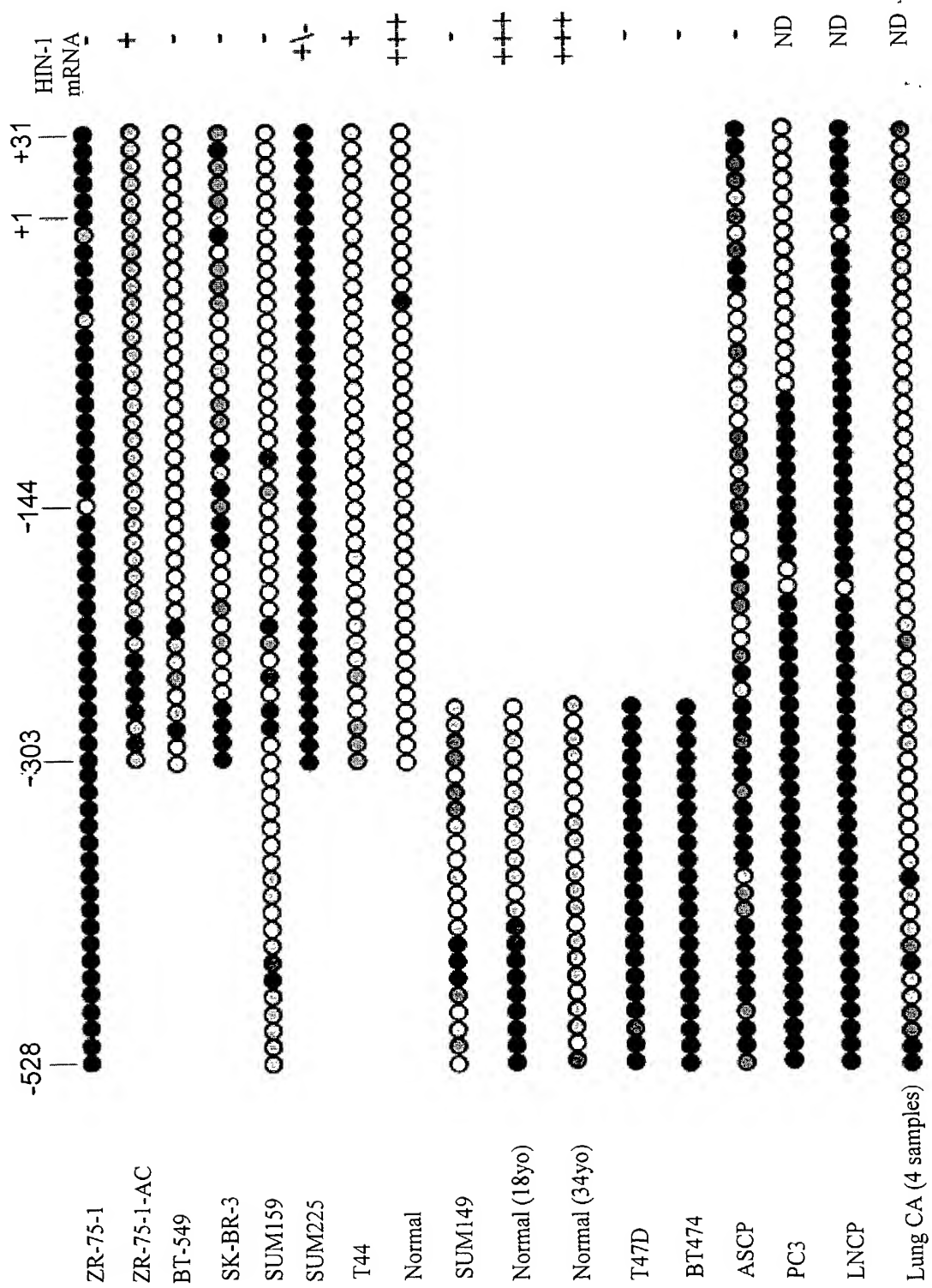
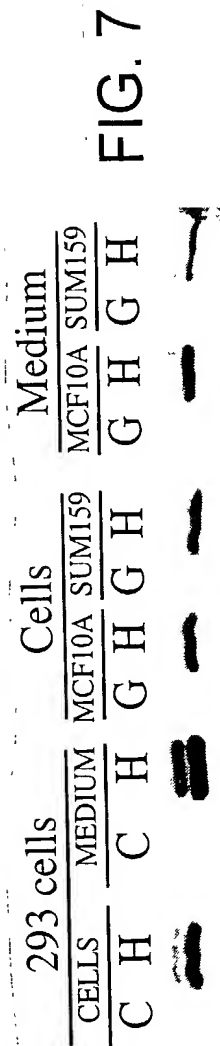


FIG. 6A



CGGCCGGGGAGGCGGCCGGGAGTGAGGCCTGATCGTCCCTGGCGCCTCCACC
TCCCCAGGCGCAGAAGGCGCCACGAGGACCCCAAGTGGCCGACGTTGCCAC
GGTCTGGGATCAGAGGCAGGGACCAGGGAGCCAGGAAGTGGCGCCGCCCCG
CCCCTGCCCTGGCGCGAGGGAAGCTCCCTCACCNGAGGGAAGCTCCCCTCAC
CCGGCCCAGCCCTGCAGGGGGGCGCGTGGGGTTCAGACCGCAAAGCGAAGGT
GCGGGCCGGGGTGGGCCTCGCGGAGACAAAGGCCGGGCCTGCCTCTCTCAGA
GGGCCCCAGCGCCTGCCAAGAGGAAGTCCTCGAGGCCCGGGCAGGGAAGGG
GGCACGGGCTTCCCAGGGCCCGCCGGCCGCAGCAGGAAGTTGGCCAGGGCA
CGGCCGTGAGCGGAGCGGGCAGGGCTTTCTCAGGAGCGCGGGCGAGGCCGG
CGCTGGAGGGGCGAGGACCGGGTATAAGAAGCCTCGTGGCCTTGCCCCGGG
AGCCGCAGGTTCCCCGCGCGCCCCGAGCCCCCGCGCC

FIG. 8

GTTCTCTGTTTTGTGTTGGTAGGCGTTGCTTTCTTGGTGGATTCACTGGCCAAG
CCTGTGGTAGAACCCGTGGCTGCCATTGCTACAGCTGCAGAGGCTGTGGCAG
GGGCTGTGCCTAGCCTACCATTAAGCCACTTGGCCATCCTGAGGTTTCATCGT
ACCAGCCTGGGCATCCCATTGGATCCTCTCATAGATGGTTCCAGGAAGTGCCT
CACCGAGCTGGGCCCTGAGGCTGTAGGAGCTGTGAAGTCACTGCTGGGGGCC
CTGACAACGTTCCGT

FIG. 9A

VLCFVLVGVAFLVDSLAKPVVEPVAAIATAAEAVAGAVPSLPLSHLAILRFIVTSL
GIPLDPLIDGSRKCVTELGPVAVGAVKSLLGALTTFG

FIG. 9B

TTCTTGGTGGATTCACTGGCCAAGCCTGTGGTAGAACCCGTGGCTGCCATTGC
TACAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACCATTAAGCCAC
TTGGCCATCCTGAGGTTTCATCGTGACCAGCCTGGGCATCCCATTGGATCCTCT
CATAGATGGTTCCAGGAAGTGCCTCACCGAGCTGGGCCCTGAGGCTGTAGGA
GCTGTGAAGTCACTGCTGGGGGCCCTGACAACGTTCCGT

FIG. 9C

FLVDSLAKPVVEPVAAIATAAEAVAGAVPSLPLSHLAILRFIVTSLGIPLDPLIDGS
RKCVTELGPVAVGAVKSLLGALTTFG

FIG. 9D

Human HIN1	M K L A A - L L G L C V A L S C S S A R A F L V G
Mouse HIN1	M K L T T T F L V L C V A L L S D S G V A F F M D
Rat HIN-1	V L C F V L V G - - V A F L V D
	M K L . . . L V L C V A L . . S V A F L . D
Human HIN1	S - A K P V A Q P V A A L E S A A E A G A G T L A
Mouse HIN1	S L A K P A V E P V A A L A P A A E A V A G A V P
Rat HIN-1	S L A K P V V E P V A A I A T A A E A V A G A V P
	S L A K P V V E P V A A L A . A A E A V A G A V P
Human HIN1	N - P L G T L N P L K L L L S S L G I P V N H L I
Mouse HIN1	S L P L S H L A I L R F I L A S M G I P L D P L I
Rat HIN-1	S L P L S H L A I L R F I V T S L G I P L D P L I
	S L P L S H L A I L R F I L . S . G I P L D P L I
Human HIN1	E G S Q K C V A E L G P Q A V G A V K A L K A L L
Mouse HIN1	E G S R K C V T E L G P E A V G A V K S - - L L L
Rat HIN-1	D G S R K C V T E L G P E A V G A V K S - - L L L
	E G S R K C V T E L G P E A V G A V K S . . . L L
Human HIN1	G A L T V F G
Mouse HIN1	G V L T M F G
Rat HIN-1	G A L T T F G
	G A L T . F G

FIG. 10

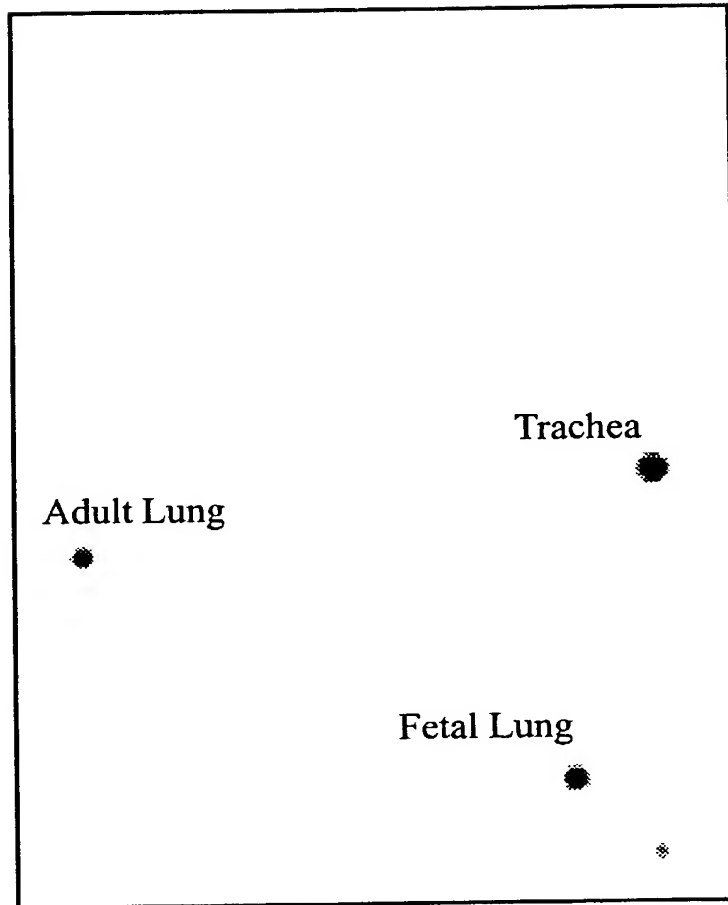


FIG. 11A

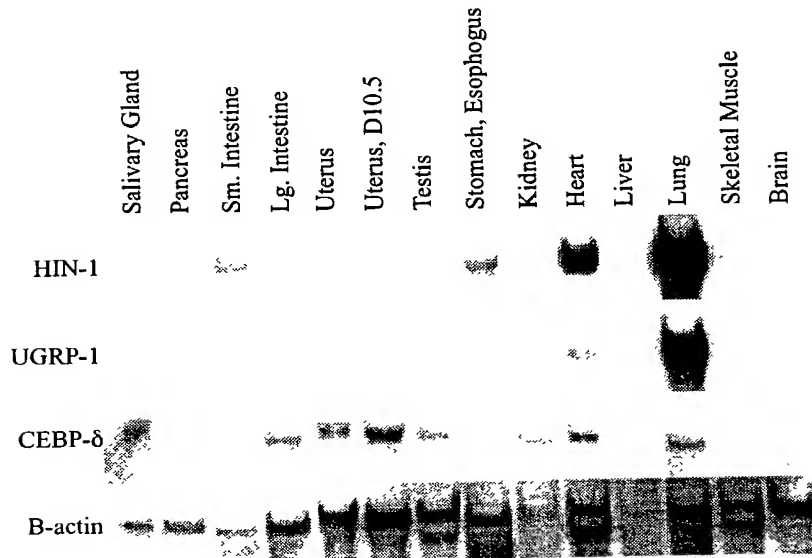


FIG. 11B

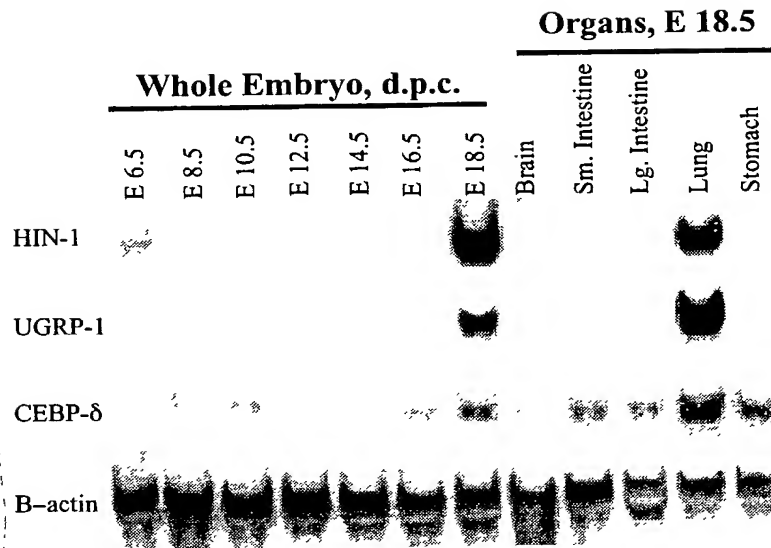


FIG. 11C

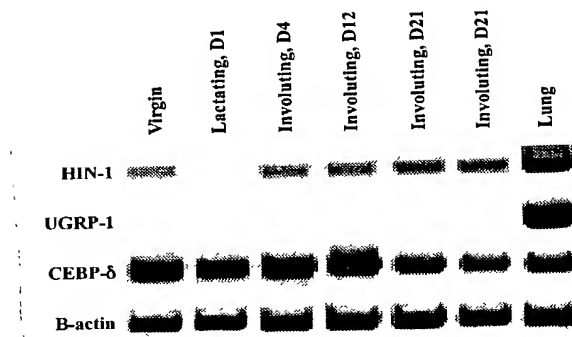


FIG. 11D

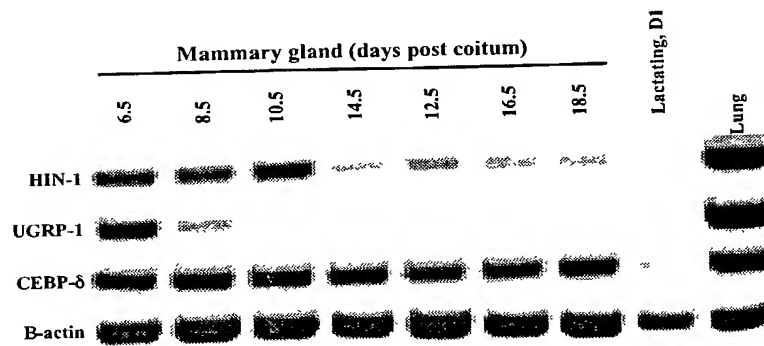


FIG. 11E



FIG. 12A

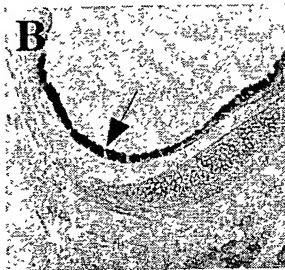


FIG. 12B

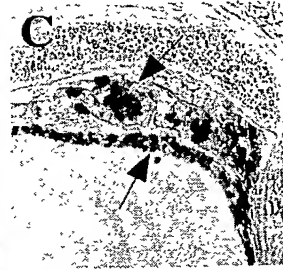


FIG. 12C

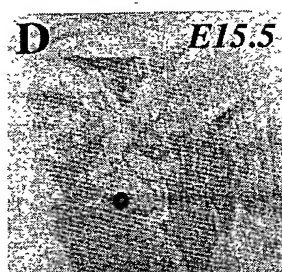


FIG. 12D

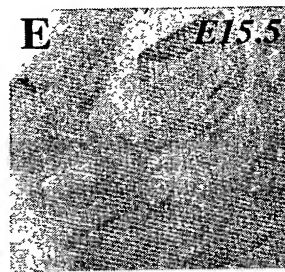


FIG. 12E

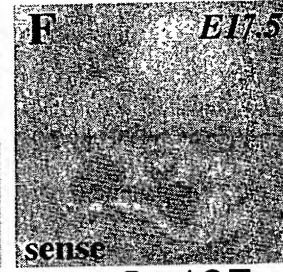


FIG. 12F



FIG. 12G

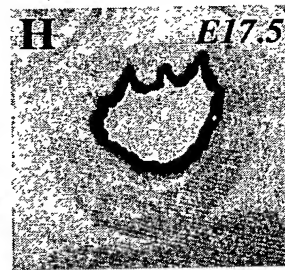


FIG. 12H

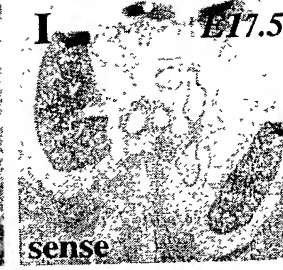


FIG. 12I

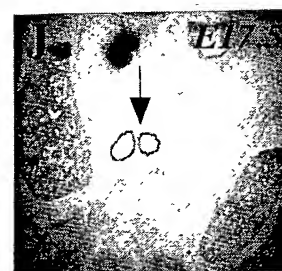


FIG. 12J

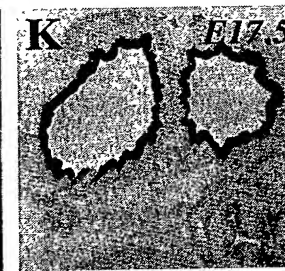


FIG. 12K

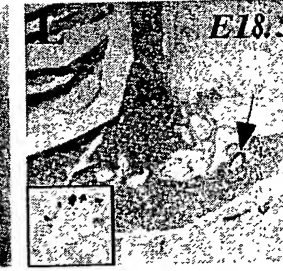


FIG. 12L

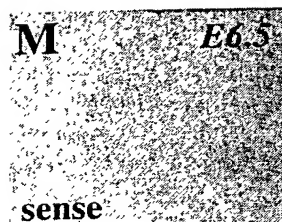


FIG. 12M

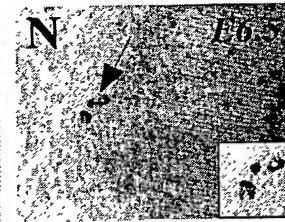


FIG. 12N



FIG. 12O

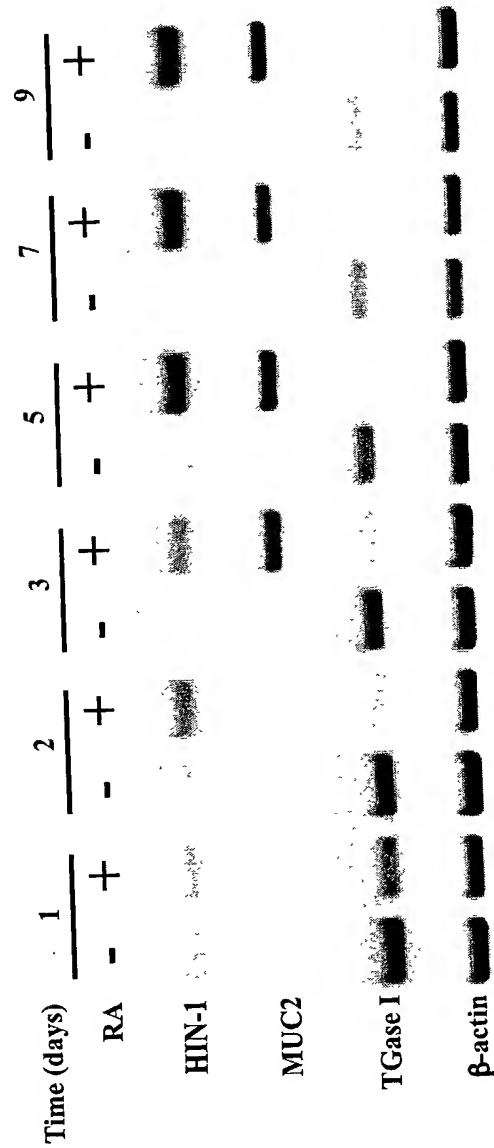


FIG. 13

Human UGRP-1
Human HIN-1
Drosophila CG13068
Drosophila CG13674

```

M K L V T I P L L V T I S L C S Y S A T A F I I N K V P L P V D K L A P L P
M K L A A L L G L C V A L S C S - S A R A P L V G S A K P V A Q P V A A L E S A A E A G A G I L
M F K L S A L V V L C A L V A C S - S A E P K P A I L A A A P V V A A P A G V V T A T S S Q Y V
M K F L A V C F F A V A V A A A K P G I V A P L A Y T A P A V V G S A R Y V A P - - Y A S S Y T A

```

Human UGRP-1
Human HIN-1
Drosophila CG13068
Drosophila CG13674

```

D R I L P P M D P L K L L L K T L G I S V E H L V E G - - - - L R K K C V N E L G P E A S E R V
A N P L G T L N P L K L L L S S L G I P V N H L I E Q - - - - S Q K C V A E L G P Q A V G A V
A R N F N G V A A A P V V A A A Y T A P V A A A A Y T - - - - A P V A A A Y T A P V A A Y
N S V A H S A A F P A A Y T A A A Y T A P V A A A A Y T A P V A A A Y T A P V A A Y T A

```

Human UGRP-1
Human HIN-1
Drosophila CG13068
Drosophila CG13674

```

K K L - L E A L - - - - - S H L V
K A L - K A L L - - - - - G A L T V F G
S A Y P Y A A Y P Y S - - - - - A A Y T T V L
Y T A P I A R Y A A T P F A A P I A A P V A A A Y T A P I A A A A P V L L K K

```

FIG. 14A

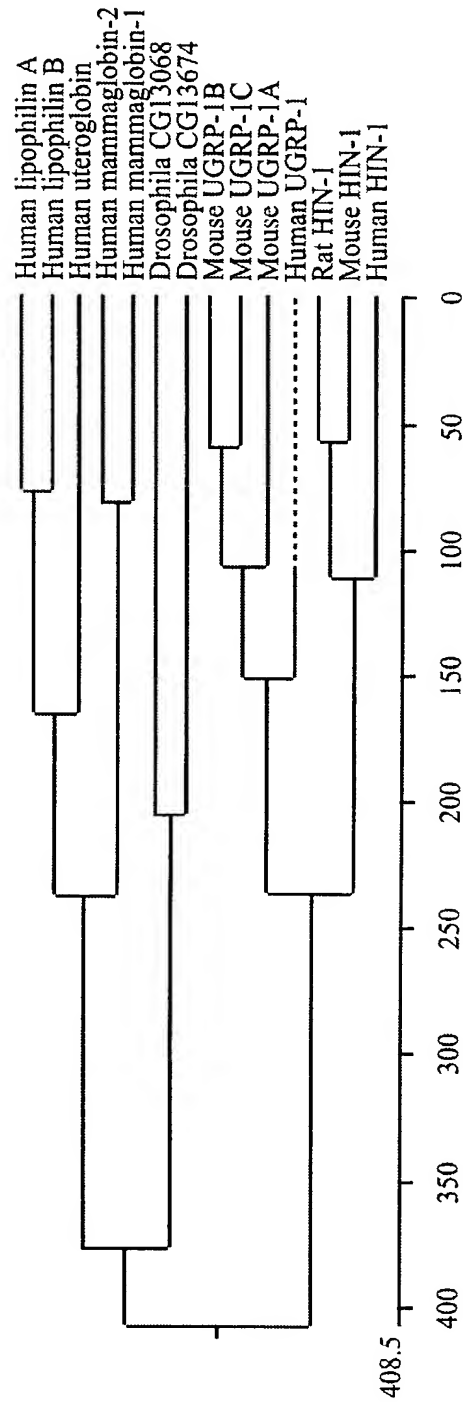


FIG. 14B

ATGTTCAAGCTGTCTGCCCTCGTTGTCCTGTGCGCTCTGGTGGCCTGCTCCTCG
GCTGAGCCCAAGCCCGCTATCCTGGCCGCCGCTCCAGTGGTTGCAGCTGCTCC
TGCCGGCGTGGTCACCGCTACCAGTTCGCAGTACGTGGCCCGCAACTTCAAC
GGTGTGGCTGCTGCTCCAGTTGTTGCCGCTGCCTACACCGCTCCAGTTGCCG
CGCTGCCTATACCGCTCCAGTTGCCGCCGCTGCTTATACCGCTCCAGTTGCCG
CTGCCTACTCTGCTTATCCGTATGCCGCCTACCCTTACAGCGCTGCATACACC
ACTGTTTTG

FIG. 15

ATGAAATTCCTCGCCGTCTGCTTCTTCGCTGTTGTGGCTGTGGCTGCTGCCAA
ACCCGGTATTGTGGCTCCTCTGGCCTACACCGCTCCGGCTGTGGTGGGCAGTG
CCGCCTACGTGGCTCCCTACGCCTCCAGCTACACCGCCAACTCGGTGGCCAC
AGCGCCGCCTTCCCAGCTGCCTACACCGCCGCCTAACTGCTCCCGTTGCTGC
TGCCTATACCGCTCCAGTGGCTGCTGCTTATACCGCTCCAGTGGCCGCTGCGT
ACGCCGCCCCAGCTGCCTATACCGCTGCCTACACCGCCCCATTGCCCGTTAT
GCCGCCACCCCTTCGCAGCACCCATCGCCGCTCCCGTGGCTGCCGCCTACAC
CGCCCCATCGCCGCCGCTGCCCCAGTTCTGCTGAAGAAG

FIG. 16